

APPLICANT(S): SMOLYAR, Lev et al.
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AMENDMENTS TO SPECIFICATION

In the Specification:

On page 5, please replace paragraph [0019] with the following amended paragraph:
– [0019] Formats of data blocks, which may refer, for example, to the number of data bits in a data block, such as, for example, format 1 and format 2, may differ, for example, in the number of data bits in a block, the number of DTX bits added to a block, etc. ~~In the example described in Fig. 1, a DTX field is added to the shorter format (format 1) in order to have the same transmission time as the longer format (format 2). In a DTX field the transmitter may not transmit data, for example, by transmitting 0 in place of –1 or 1. In the current example, assuming an encoding rate (R) of 1/3, for example, a function describing the relationship between the two formats described in Fig. 1 may be:~~

$$3*(N1+NCRC+Ntail)+NDTX = 3*(N2+NCRC+Ntail).$$

Other encoding rates and functions may be used. –

On page 5, please replace paragraph [0020] with the following amended paragraph:
– [0020] According to the WCDMA standard, in some cases a data transmission source, such as, for example, a base station, may not inform the mobile handset or other receiving device about the precise format of the transmitted data block, in which cases the mobile device, in order to decode the data block, may need to determine which format out of a predetermined set of possible formats have actually been sent. The base station may, for example, transmit data that may include a set of possible formats to the data-receiving device. The set of possible format parameters may be transmitted, for example, in a block header or transmitted in another suitable form. Determination of the format type in such cases may require, for example, blind format detection. An example of a known blind format detection method is that described in the “3GPP TS 25.212 V3.9.0”, published 2002-03, pages 56-57, titled, “3rd Generation Partnership Project (3GPP standard); Technical Specification Group Radio Access Network; Multiplexing and channel coding (FDD)

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~~format (format 1) in order to have the same transmission time as the longer format (format 2). In a DTX field the transmitter may not transmit data, for example, by transmitting 0 in place of 1 or 1. In the current example, assuming an encoding rate (R) of 1/3, for example, a function describing the relationship between the two formats described in Fig. 1 may be:~~

~~3*(N1+NCRC+Ntail)+NDTX = 3*(N2+NCRC+Ntail).~~

~~Other encoding rates and functions may be used.~~

~~(Release 1999)", Blind transport format detection may use CRC for blind format detection. For example, a data-receiving device may perform Viterbi-decoding on a soft decision sample sequence, such that an assumed correct trellis path of the Viterbi-decoder ends at a zero state at the correct end bit position. Other formats or processes may be used. --~~

On page 7, replace paragraph [0023] with the following amended paragraph:

—In the above example, r_i refers to samples of the received bits, where $-\infty < r_i > \infty$. r_i may include all bits received, including data bits and DTX bits. Each \hat{d}_i value may refer to a respective possible transmitted bit, and may have a value of -1 or 1. These \hat{d}_i values may be derived from the r_i values by using, for example, a Trellis metric. A Trellis metric may, for example, be calculated by Trellis algorithm or a Viterbi algorithm or any other suitable function for determining the most probable sequence of hidden states given a sequence of observed states. The resulting set of \hat{d}_i values may express the transmitted data, however it may be unclear which of these \hat{d}_i values represent the actual format of the transmitted block. The Viterbi/Trellis algorithm may calculate a Viterbi metric value for each of the possible format values ($N_{(format_j)}$). For example, the format values may include the set of 100, 200 and 300. Other functions may be used to determine the Viterbi metric values.—

On page 7, replace paragraph [0024] with the following amended paragraph:

—The calculated Viterbi metric values for each of a plurality of possible format parameters for transmitted data bits, $N_{(format_j)}$, may be used to determine

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format metrics for one or more of the possible format values, which may be calculated according to, for example, a function such as:

$$\text{FormatMetric}_{(\text{format_j})} = \frac{\text{ViterbiMetric}_{(\text{format_j})}^2 - N_{(\text{format_j})} \ln(2) / \text{CodingRate}}{2\sigma^2 N_{(\text{format_j})}}$$

Other suitable functions may be used. In the above function, for example, $N_{(\text{format_j})}$, which is the number of bits transmitted without, for example, the DTX bits, is one of a set of possible $N_{(\text{format_j})}$ values for the possible respective formats, that can be transmitted by the data transmission source. ViterbiMetric²-ViterbiMetric² may, for example, refer to the square of the Viterbi metric value calculated above for the particular assumed format. Sigma (σ) may represent the noise standard deviation of the received data symbols, as may be calculated by known algorithms for determining noise standard deviation from received signals. Sigma² (σ^2) may represent the noise variance of the received data symbols, and may be calculated by known algorithms for determining noise variance from received signals. CodingRate may represent the encoding rate (R) used by the data transmitter source to encode the data block for transmission.—